

ADDITIONAL NOTES ON THE GENUS PETREA. IX

Harold N. Moldenke

PETREA Houst.

Additional bibliography: Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 605. 1927; Babu, Herb. Fl. Dehra Dun 20. 1977; Croat, Fl. Barro Colorado 46, 732, 735, 873, 874, 876, & 913. 1978; Mold., Phytologia 42: 292—318, 470—500, & 509. 1979.

PETREA ARBOREA H.B.K.

Additional bibliography: Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 605. 1927; Mold., Phytologia 42: 300—304, 315, 475, 481, 486, 490, & 492. 1979.

Knuth (1927) cites from Venezuela the following collections: Carabobo: Humboldt & Bonpland s.n.; Pittier 8774. Federal District: Jahn 343; Moritz 191; Otto 570; Pittier 7853; Wagener 293. Miranda: Pittier 6063. He states that the Pittier 8774 was taken from cultivated material. He lists the vernacular names, "Maria", "Santa Lucia", and "tostadito".

PETREA ASPERA Turcz.

Additional bibliography: Croat, Fl. Barro Colorado 46, 732, [734], 735, 873, 874, & 876, fig. 479. 1978; Mold., Phytologia 42: 300, 304—307, 310, 313, 315, 317, 473, 475, & 493. 1979.

Additional illustrations: Croat, Fl. Barro Colorado [734], fig. 479. 1978.

Croat (1978) says that on Barro Colorado island this species is "Abundant in the canopy and at the edge of the forest over the lake; one plant grows as an epiphyte from a large ant nest..... Flowering and fruiting throughout the year, often in synchronous waves throughout the forest". He gives its general distribution as "Widespread in tropical America from northern Mexico to southern Brazil; Cuba, West Indies; widely cultivated. In Panama, known from tropical moist forest in the Canal Zone, San Blas, Veraguas, Los Santos, Panamá, and Darién." Actually this distribution is erroneous — the species is not known from north of El Salvador [and even this record is doubtful!], not at all from Cuba or the West Indies, nor south of Mato Grosso, Brazil. He cites Croat 9432, as well as Avilas 14 and Shattuck 412 which I have previously (and apparently erroneously) reported as P. volubilis L.

Emended citations: PANAMA: Barro Colorado Island: Avilas 14 (Cz); Shattuck 412 (Cz).

PETREA BREVICALYX Ducke

Additional bibliography: J. A. Clark, Card-Ind. Gen. Sp. Var. Pl. issue s.n. 1933; Mold., Phytologia 42: 311. 1979.

PETREA GLANDULOSA Pittier

Additional bibliography: Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 605. 1927; Mold., Phytologia 42: 312—313 & 475. 1979.

Knuth (1927) reports the vernacular name, "penitente", for this species in Venezuela.

PETREA VOLUBILIS L.

Additional bibliography: Babu, Herb. Fl. Dehra Dun 20. 1977; Croat, Fl. Barro Colorado 735 & 913. 1978; Mold., Phytologia 42: 473, 476, 477, & 480—494. 1979.

Croat (1978) has examined the Avilas 14 and Shattuck 412, previously cited by me in this series of notes as P. volubilis, and reports that they definitely are P. aspera Turcz. Petrea volubilis is, therefore, unknown to date from Barro Colorado island. Babu (1977), however, reports it "a common ornamental climber in gardens and parks" in Dehra Dun, India.

PETREA VOLUBILIS f. **ALBIFLORA** (Standl.) Standl.

Additional bibliography: Mold., Phytologia 7: 450. 1961; H. F. MacMillan, Trop. Plant. & Gard., ed. 5, 122. 1962; Esteva, Arb. Ornament. Trop. 355. 1969; Lowden, Taxon 19: 845. 1970; Mold. in Menninger, Flow. Vines 338, pl. 191. 1970; Mold., Fifth Summ. 1: 82 & 367 (1971) and 2: 597, 898, & 968. 1971; Mold., Phytologia 23: 426. 1972; Rouleau, Taxon Index Vols. 1-20 part 1: 280. 1972; Mold., Phytologia 25: 242 (1973) and 42: 316, 492, & 494. 1979.

Illustrations: Mold. in Menninger, Flow. Vines pl. 191 (in color). 1970.

Chittenden (1956) lists this plant as cultivated in England, saying "fl. white". Esteva (1969) reports it both cultivated and escaped in Venezuela. Miller (1935) found it in Barbados gardens, noting that it "differs from the purple petrea only in that its leaves are pale green, it is more easily grown as a shrub, and its flowers are white and last only about 4—7 days" — it is possible that his plant may have been P. kohautiana f. alba (Freeman & Williams) Mold., as is probably also the case with the "P. volubilis white flowered" of MacMillan (1962).

The Ruiz-Terán & López-Palacios 10870, distributed as P. volubilis f. albiflora, actually is P. kohautiana f. alba (Freeman & Williams) Mold.

Additional citations: CULTIVATED: Pennsylvania: J. W. Peterson J.890 (Ba).

PETREA VOLUBILIS var. **PUBESCENS** Mold.

Additional synonymy: Petrea mexicana Humb. & Bonpl. apud Steud., Nom. Bot., ed. 1, 606. 1821 [not P. mexicana Willd., 1841]. Petrea arborea var. pubescens Mold., Phytologia 42: 492—493, nom. nud. 1979.

Additional bibliography: Langman, Select. Guide Lit. Flow. Pl. Mex. 515. 1963; Mold., Résumé Suppl. 15: 3 (1967) and 17: 7. 1968;

Mold., Fifth Summ. 1: 72, 80, 83, 85, 88, 91, 101, & 367 (1971) and 2: 595, 598, & 898. 1971; A. L. Mold., *Phytologia* 23: 319. 1972; Mold. in Woodson, Schery, & al., *Ann. Mo. Bot. Gard.* 60: 82, 87, & 147. 1973; Mold., *Phytologia* 28: 450 (1974), 31: 378 (1975), 34: 263 (1976), 36: 45 (1977), and 42: 304 & 492--493. 1979.

This variety differs from the typical form of the species in having the leaf-blades conspicuously and more or less densely pubescent on both surfaces when young or only beneath when mature.

Recent collectors describe this plant as a twining or shrubby vine, 10--30 feet long, or even as a small tree, the "flowers papery", and the "bracts" lavender or lilac [obviously referring to the calyx and fruiting-calyx]. The corollas are described as "blue" on Breedlove 9926, Laughlin 178, Rzedowski 7346, and Ventura A. 3218, "purple" on Chiang 343, Moore 2536, and Surapat 43, and "dark but brilliant ultramarine" on Gregory 589.

Recent collectors have found this plant growing on wooded slopes, in and around thickets, in high trees at river edges, in open dry woodland, on slopes with Quercus, in dry woodland with limestone outcrops, on the sides of barrancas, on dry rocky hills, in matorral on flat ground, in sandy rocky "pardo" soil in Manilkara woods, and in full sun on limestone soil, at altitudes of 400--2000 m., flowering from January to May and in September, in fruit in March. Rzedowski encountered it on "ladera caliza con vegetación de bosque tropical deciduo, planta trepadora". Worthington found it growing in an area of 78-inch rainfall and notes that his no. 6967 was used in an experiment to preserve the natural color of the inflorescence by drying it "immediately in cotton wool", but the color was gone in a month and the experiment judged "a failure". Read reports that in Florida it "blooms several times per year, [the] deep purple corolla early falling, leaving the lighter blue calyx persistent with the developing fruit".

Vernacular names reported for the variety are "chorreque", "cuera de zapo", "flor de Jesús", "manto de Jesús", and raspaguacal".

The Jerabek s.n. [June 1945], cited below, is a mixture with Vitex agnus-castus L., while Linden 18 is a mixture with Quercus xalapensis Humb. & Bonpl.

Material of this variety has often been identified as typical P. volubilis L., as "P. volubilis Jacq.", and as P. arborea H.B.K. On the other hand, the Moldenke & Jayasuriya 28131 seems better regarded as typical P. volubilis; Mahdi s.n. [4/6/1967] and s.n. [24/4/1965] have subglabrous leaves.

Additional & emended citations: MEXICO: Chiapas: Breedlove 9016 (M1), 9925 (Ac); Laughlin 178 (Ld); H. E. Moore 2536 (Ba); D. C. Saunders 43 (Ld); Souvireon & Erlanson 68 (W--1586243). Guerrero: Crisman & Willis 200 (Au--247326). Oaxaca: Seler & Seler 1777 (W--1205489). Puebla: Nicolas s.n. [X.1908] (W--1159320). San Luis Potosí: J. Rzedowski 7339 (Ip), 7346 (Ip). Tamaulipas: Bark-

ley 17M174 (Au--121222). Veracruz: F. Chiang 343 [Rec. Inf. DOO5713] (E--2069123, Mi); Cox 850 [Herb. Cox 642] (Oa); Linden 18 in part (Mi); Ventura A. 3218 (Au--303916, Mi). GUATEMALA: Chiquimula: D. P. Gregory 589 (Ld). El Quiché: Heyde & Lux 2973 (W--58252, W--480109, W--1323176). Progreso: Popenoe 954 (W--1080609). Santa Rosa: Kellerman 7738 (W--2441980). Department undetermined: C. C. Deam 6092 (Mi). HONDURAS: Colón: Record & Kuylen s.n. [Olanchito] (W--1315435); Severén 19 (W--1209928). Comayagua: J. B. Edwards P.586 (Ca--522767, F--688135, W--1588678); P.601 (W--688152--isotype, W--1588669--type). El Paraíso: Barkley & Barkley 40156 (Ld). Morazán: C. V. Morton 7080 (W--2023246). EL SALVADOR: San Salvador: Calderón 268 (W--1151280); Renson 234 (W--399529); P. C. Standley 22755 (W--1138486). COSTA RICA: Guanacaste: Tonduz s.n. [Herb. Inst. Physico-geogr. Nat. Costaric. 13843] (W--577877, W--577878, W--1323170), s.n. [Herb. Inst. Physico-geogr. Nat. Costaric 16655] (W--578873). Puntarenas: Lanckester s.n. [Jan. 1926] (W--1266801). JAMAICA: D. Hummel s.n. [29/4/1958] (S). INDIA: West Bengal: Mukherjee s.n. [16.3.68] (Ld). CULTIVATED: California: Jerabek s.n. [Balboa Park, Jan. 1945] (Sd--34943), s.n. [Pacific Beach, April 1945] (Sd--36096), s.n. [June 1945] (Sd--36463). Egypt: Mahdi s.n. [6/9/1961] (Gz), s.n. [6/11/1963] (Gz, Gz, Gz), s.n. [12/7/1964] (Gz, Gz), s.n. [24/4/1965] (Gz, Gz), s.n. [4/6/1967] (Gz, Gz, Gz); V. Thackholm s.n. [30/10/1959] (Gz). El Salvador: M. C. Carlson 503 (Ca--703622). Florida: Gifford & Totten s.n. [January 1, 1941] (Hi--22562); R. W. Read X-1-55 (Ft--2205). Hawaiian Islands: Judd, Bryan, & Neal s.n. [Sept. 25, 1937] (Mu); A. R. Moldenke 96 [H. N. Moldenke 21869] (Z). Sri Lanka: Collector undetermined s.n. [Royal Bot. Gard., May 1887] (Pd); Worthington 6967 (P, Pd). Thailand: Surapat 43 (W--2450874).

ADDITIONAL NOTES ON THE GENUS PETITIA. IV

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Herbarium acronyms used in this paper, as in all preceding ones in this and other series of notes in PHYTOLOGIA, are explained in full in my "Fifth Summary of the Verbenaceae...." (1971), pages 795--801.

PETITIA Jacq.

Additional synonymy: Petatia Dod & Fortuna, Bol. Jard. Bot. Moscoso 2 (3): 16, sphalm. 1975.

Additional & emended bibliography: P. Br. in Sloane, Civil Nat.